DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Pursell, Gary
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-016544
Date Inspected: 27-Aug-2010

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 800
OSM Departure Time: 1630
Location: Job Site

CWI Name: Jim Cunningham and Steven Mc Connell **CWI Present:** ☑ Yes ☐ No

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☑ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Orthotropic Box Girder

Summary of Items Observed:

Caltrans Office of Structural Material (OSM) Quality Assurance Inspector (QAI) Joselito Lizardo was present at the Self Anchored Suspension (SAS) job site as requested to perform observations on the welding of components for the San Francisco Oakland Bay Bridge (SFOBB) Project.

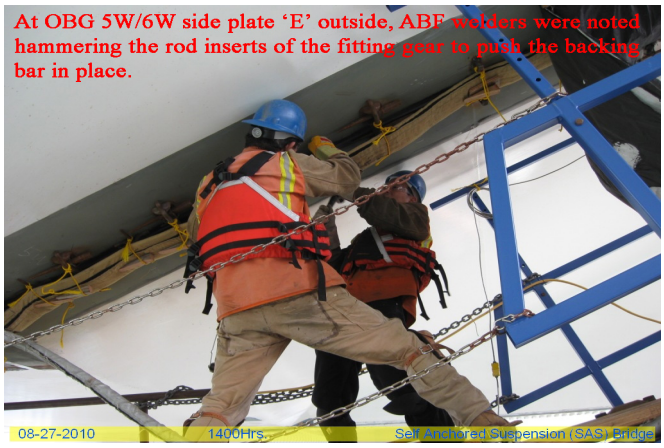
At OBG 5W/6W side plate ‘E’ (500mm to 3640mm) inside, QA randomly observed ABF/JV qualified welder Sungtao, Huang ID # 3794 has completed the cover reinforcement of the area he was welding and has moved to new location 7900mm to 10555mm. Prior to weld the root pass, the welder was noted opening the root gap by grinding where the gap was measured less than 4.0mm. The welders were also noted fixing the backing bar from the outside due to gap noted between the backing bar and the plate. QC thought that that was due to constant hammering of the rod inserts on the temporary WT connection plates during their removal. Some of the fitting gear rod inserts at the outside came loose. After fixing the backing bar by hammering back the rod inserts, the welder went back inside and FCAW-G welded by hand a 500mm long root at the bottom section. Welding of the root pass on the whole length of the new location was cut short when suddenly the superintendent has informed the welder that they were working eight hours only. During welding, the welder was observed performing manual welding in the 3G (vertical) position utilizing a dual shield Flux Cored Arc Welding (FCAW-G) with E71T-1M, 1/16” diameter wire electrode and implementing Caltrans approved Welding Procedure Specification (WPS) ABF-WPS-D15-3042B-1. The joint being welded had a single V-groove butt joint with backing bar. The splice joint was preheated and maintained to greater than 150 degrees Fahrenheit using Miller Proheat 35 Induction Heating System located at the opposite side of the plate prior/during welding. ABF Quality Control (QC) Bonifacio Daquinag was noted monitoring the welding parameters of the welder.

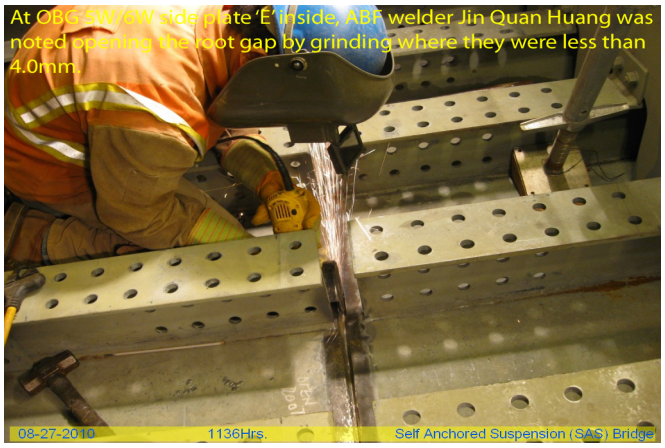
At OBG 4E/5E side plate ‘C’ outside, QA randomly observed ABF/JV qualified welder Rick Clayborn perform CJP groove welding repair. The welder was observed welding in the 4G (overhead) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The weld repairs were excavated to a boat shape. The repair excavations were preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Jim Cunningham was noted monitoring the welder. Prior welding, ABF QC Jim Cunningham was also observed performing Magnetic Particle Testing (MT) on the repair excavations. During the shift, the welder has completed two welding repairs from the outside and this should continue tomorrow.

At OBG 5E/6E edge plate ‘B’ outside, QA randomly observed ABF/JV qualified welder Rory Hogan perform CJP groove welding repair. The welder was observed welding in the 3G (vertical) position utilizing Shielded Metal Arc Welding (SMAW) with 1/8” diameter E7018H4R electrode implementing welding procedure ABF-WPS-D15-1000-Repairs. The weld repair was excavated to a boat shape. The repair excavation was preheated to more than 140 degree Fahrenheit using propane gas torch prior welding. During the shift, ABF QC Steven Mc Connell was noted monitoring the welder. Prior welding, ABF QC Steven Mc Connell was also observed performing Magnetic Particle Testing (MT) on the repair excavations. At the end of the shift, the welder has completed one welding repair from the outside.

At 4E/5E side plate ‘C’ inside, QA noted ABF welder Fred Kaddu has completed 15 (UT) repairs from the inside and has moved to plate ‘E’ of the same OBG splice. The welder was noted excavating welding repairs to a boat shape profile from the inside and has excavated three repairs during the shift. The welder’s work was cut short when the superintendent has informed the welders that they were working eight hours only.

At OBG 5E/6E bottom plate ‘D’ outside, ABF personnel was noted flush grinding the weld cover reinforcement of the welded splice butt joint as required. The personnel was using 9” flapper disc grinder with the grinding cut to the plate parallel to the direction of the bridge in compliance to the project specification. Flush grinding was still continuing at the end of the shift and should remain tomorrow.





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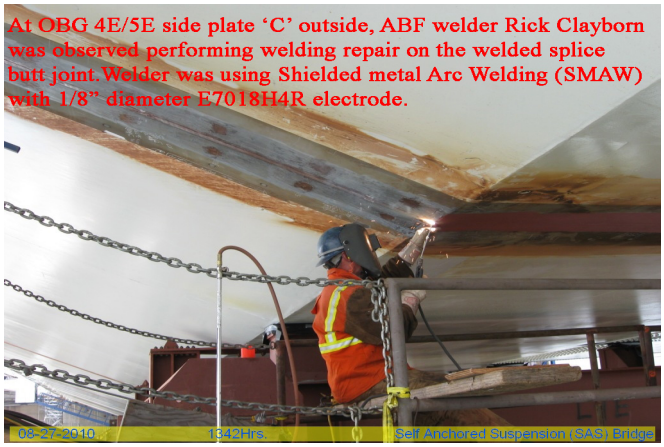

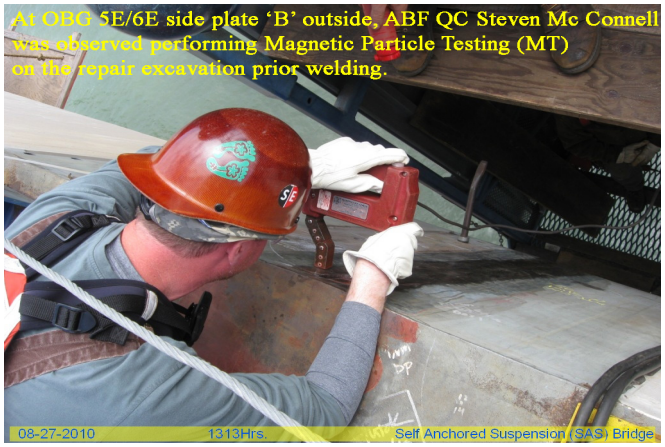

Summary of Conversations:

No significant conversation ocurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact SMR Mohammad Fatemi (916) 227-5298, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo,Joselito	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer